



Insight into the long-term psychological impacts of the COVID-19 pandemic

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Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has caused over 668 million confirmed infections and over 6 million deaths from coronavirus disease 2019 (COVID-19) worldwide (as of January 23, 2023) [1]. A pandemic of such magnitude poses considerable challenges to health care systems. It stretches hospitals to their limits in their capacity to care for patients [2] and places health care workers as well as vulnerable populations at severe risk. The SARS-CoV-2 pandemic resulted not only in acute illnesses, but also in long-term consequences. While there is an extensive increase in literature on the COVID-19 pandemic in general, the long-term consequences and their underlying mechanisms remain poorly understood. Thus, several new findings and aspects are highlighted in this issue of the European Archives of Psychiatry and Clinical Neuroscience.

Li et al. present new insights into the long-term psychological consequences of COVID-19. They found that a high proportion of COVID-19 survivors still suffered from poor sleep quality, fatigue, anxiety, depression, and PTSD 1 year after infection [3]. Risk factors for these mental health outcomes included smoking, alcohol use, and low educational status. In addition, history of chronic disease was an independent risk factor for poor sleep quality, fatigue, depression, and PTSD. This study points to the long-term psychological impact of COVID-19 in survivors and highlights the urgent need for appropriate mental health services for psychological support.

In another study, a group led by Benke and Pané-Farré examined the question of what long-term changes in mental health occurred in the general German population as a result

of the pandemic in a longitudinal observational study. Their data from 1388 adults showed that depressive symptoms and loneliness increased over the course of the pandemic while life satisfaction decreased comparing baseline to 12-month follow-up. In addition, they found that particularly vulnerable groups, such as younger people or those with mental disorders, were more severely affected by psychopathological symptoms [4]. These outcomes point to a deterioration in mental health during the COVID-19 pandemic, underscoring the importance of implementing targeted health interventions to prevent the onset of severe mental illness, particularly among vulnerable groups.

In addition to the long-term consequences of COVID-19 disease, the psychological and psychosocial consequences of lock down- and isolation measures must be considered. To date, few studies have examined the long-term psychological effects of familial confinement and exposure to SARS-CoV-2 infection in adolescents. This aspect was studied by Qu and colleagues. They found that psychological resilience was a protective factor in preventing depression and anxiety symptoms among adolescents at increased risk of infection. Emotional abuse and poor parent–child relationships were risk factors. Long-term institutional care had low psychological impact on adolescents, but SARS-CoV-2 infection rates were significantly associated with adolescent depression and anxiety.

Reif-Leonhard et al. investigated suicidal behavior during the pandemic. Their data showed a decrease in suicide attempts during the pandemic, while completed suicides did not change. Suicide attempts were more likely in patients who lived alone. Age, gender, occupational status, and psychiatric diagnoses did not differ during the pandemic. The rate and number of intoxications as a suicide method also increased, and more people attempted suicide in their own homes. In addition, the colleagues assumed that a high number of suicide attempts remained unnoticed because they occurred in the home environment and the methods used were associated with lower lethality [6].

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To examine the impact of the COVID-19 pandemic on patients with mental disorders, Kippe et al. conducted a retrospective chart review of psychiatric emergency departments with suicidality present or absent. They found that suicidality increased during the first wave of the COVID-19 pandemic. In the second wave, this was observed in patients with substance use disorders and bipolar disorder. Thus, these patients may be particularly suicidal during the pandemic [7] and need increased attention.

The long-term consequences of SARS-CoV-2 infection include long lasting sequelae termed post-COVID syndrome (PCS) among other terms. The PCS encompasses a wide range and variety of somatic symptoms. Frequent symptoms are fatigue, cough, headache, limb pain, myalgias, loss of taste and smell, and shortness of breath [8]. Damiano et al. examined the association of taste and smell during acute COVID-19 with symptoms of PCS patients. Their research question was whether chemosensory abnormalities and neuropsychiatric impairments are related. Indeed, the colleagues found a positive association between chemosensory abnormalities and cognitive impairment in PCS patients [9].

Finally, this issue includes a molecular biology study by Tabano et al. They examined depressive and PTSD symptoms and levels of methylation of stress-related genes in frontline health care workers (FHCW) compared with non-frontline health care workers in wards not involved in COVID-19 care. FHCW experienced more mental distress than members of other health professions. Their methylation levels were elevated in genes regulating the HPA axis (CRHR1) and dopamine neurotransmission (DRD2 and LSD1) suggesting that methylation of these genes may be modulated by stressful conditions and may influence the development of depression and PTSD.

This issue presents the results of several new studies on the long-term consequences of the COVID-19 pandemic. It also highlights the importance of biological studies to demonstrate current gaps in knowledge in this area and to identify biomarkers of stress-related impairments.

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